

BI 256- 4 credits

Human Anatomy and Physiology II

Course Description

The second of a two-course sequence, this course provides a lecture and laboratory study of the structure and function of human cells, tissues, organs and body systems as they relate to human health and biology. The course stresses homeostatic control systems and coordinated body functions with an emphasis on the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.

Course Learning Outcomes

Upon completion of this course, the student will have:

1. Synthesized ideas to make a connection between knowledge of anatomy and physiology in real-world situations, including healthy lifestyle decisions and homeostatic imbalances. (Program Outcome #4)
2. Described the interrelationship among molecular, cellular, tissues, and organ functions in the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.(Program Outcome #3)
3. Evaluated the physiological functions of the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems. (Program Outcome #3)
4. Demonstrated laboratory procedures to identify anatomical structures and landmarks pertaining to the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems. (Program Outcome #2)
5. Used anatomical knowledge to describe physiological consequences. (Program Outcome #2)

Assessment of Outcomes

| | |
|-----------------------|-----|
| Lecture and Lab Exams | 60% |
| Quizzes | 10% |

| | |
|-----------------------------------|-------------|
| Participation and Professionalism | 10% |
| Activities - Lab and Theory | 10% |
| Cumulative Final Exam | 10% |
| Total | 100% |

Required Books & Resources

Required Textbook: Human Anatomy and Physiology 11th Edition by Elaine N. Marieb and Katja Hoehn

ISBN-13: 978-0-13-535443-8

ISBN-10: 0-13-535443-9

Recommended Books & Resources

Laboratory Guide for Bellin College BI156 and BI256

Objectives & Content Outline

| | |
|---|------------------------|
| Unit 1: Blood, Cardiovascular and Lymphatic Systems | |
| Unit Objectives | Content Outline |

| | |
|---|--|
| <p>Upon completion of the unit, the student will be prepared to:</p> <ol style="list-style-type: none"> 1. Discuss the composition of blood. 2. Describe the flow of fluid through the pulmonary, systemic, and lymphatic circulations. 3. Locate and explain the role of structures within the cardiovascular system. 4. Summarize the function of blood components and explain the basis of blood types. 5. Explain the functioning of the immune system and immunity. | <ul style="list-style-type: none"> ● Blood ● The Cardiovascular System ● The Lymphatic System ● Immunity |
|---|--|

| Unit 2: Respiratory System, Digestive System, and Nutrition | |
|---|---|
| Unit Objectives | Content Outline |
| <p>Upon completion of the unit, the student will be prepared to:</p> <ol style="list-style-type: none"> 1. Identify the structures of the Respiratory system in the order of inhalation and exhalation. 2. Explain the role of gas laws in ventilation. 3. Connect the role of nervous system structures learned to the regulation of breathing. 4. Identify gross and microscopic components of the GI tract. 5. Relate all learned structures to their corresponding functions. 6. Discuss the connection between the functions of the digestive system and the functions of other body systems. 7. Describe the role of metabolism in energy balance and nutrition. | <ul style="list-style-type: none"> ● Respiratory System ● Digestive System ● Basics of Nutrition |

Unit 3: Urinary System, Acids/Bases and pH Balance, and the Reproductive System

Unit Objectives

Content Outline

Upon completion of the unit, the student will be prepared to:

1. Identify structures and functions of Urinary System Organs
2. Describe the process of urine formation.
3. Discuss normal vs abnormal urine samples.
4. Discuss the physiological processes involved in electrolyte homeostasis within the body.
5. Identify the gross and microscopic structures of the Male and Female Reproductive System
6. Correlate the anatomical structures to the physiological functions of the structures.
7. Discuss the relationship between learned anatomy and physiology to other human body systems.

- Urinary System
- Acids, Bases, and pH Balance
- The Reproductive System

Final Exam

Unit Objectives

Content Outline

| | |
|--|--|
| <p>Upon completion of the course, the student will be prepared to:</p> <ol style="list-style-type: none"> 1. Discuss and use correct anatomical and clinical terminology related to anatomy and physiology. 2. Demonstrate knowledge of correct terminology in communications, on written course materials and in the laboratory. 3. Demonstrate basic knowledge of common clinical terms and several diseases or pathological states related to each of the body systems studied in the course. 4. Demonstrate proficiency on all body systems discussed in the course and their interactions with one another. | <ul style="list-style-type: none"> • Exam |
|--|--|

Accommodations Request

Bellin College has a continuing commitment to providing reasonable accommodations for students with documented disabilities. Students with disabilities who may need some accommodation in order to fully participate in this class are urged to contact the Advisor and Accommodations Coordinator in Student Services One Stop, as soon as possible, to explore what arrangements need to be made to assure access.

Grading Policy

The following grading system is used to determine course achievement:

| | Letter Grade | Grade Points Per Credit | Numeric Grade Equivalent |
|--|---------------------|--------------------------------|---------------------------------|
| | A | 4 points | 93-100 |

| | | | |
|---|----|------------|----------|
| | AB | 3.5 points | 88-92 |
| | B | 3 points | 83-87 |
| | BC | 2.5 points | 78-82 |
| BELLIN COLLEGE MINIMUM PROGRESSION REQUIREMENT | C | 2.0 points | 70-77 |
| | D | 1 point | 60-69 |
| | F | 0 point | below 60 |

Each course is graded in its entirety. A student must be successful in all course requirements to receive a passing grade. The course outcomes are represented in all course components.

Assessment of Student Academic Achievement Plan

Any testing and remediation required as part of the Assessment Plan must be completed prior to progression into subsequent courses.

Exam Proctoring

Bellin College students are responsible to pursue their studies with integrity and honesty. Exams in Canvas are proctored using Honorlock, an online proctoring service that promotes academic integrity. Students taking exams in Canvas are required to use this system as instructed by faculty. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable Internet connection. Please see the Technical Requirements & Support link for more details.

Academic Policies

Please refer to the [Bellin College Guide - Handbook & Catalog](#)

[\(Links to an external site.\)](#)

for the following policies:

- Attendance Policy (class, lab, clinical)
- Late Exam Policy
- Late Graded Assignment Policy
- Academic Misconduct Policy
- Information Technology – Acceptable Use Policy

Copyright Notice

The college materials on this course website are only for the use of students enrolled in this course for the purposes associated with this course and may not be retained or further disseminated.

Student Use of Electronic Devices during Courses

Electronic devices within the classroom, lab, and clinical courses may be utilized by students for appropriate learning purposes only. Cell phone ringtones shall be put on “vibrate/silent” during all course times and utilized for emergency purposes only. Repeated violations and/or course disruptions due to inappropriate use of electronic devices will be referred to the appropriate Program Director for disciplinary measures.

Bellin College Values

Excellence - *being the best*

Integrity - *honest and ethical behavior*

Community - *collaboration and inclusion*

Caring - *empowering relationships based on empathy and respect*

Supplementary Documents

- View the [Course Schedule](#) for weekly topic, preparation, and assignment details
- View the [Course Guide](#) for unit objectives, content outlines, and additional course specific expectations and guidelines to help you be a successful student in this course.